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• 886-2-2713-3970, 2713-3999(10F)  
• 886-2-2718-8497(PATENT)  
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5 January 2004

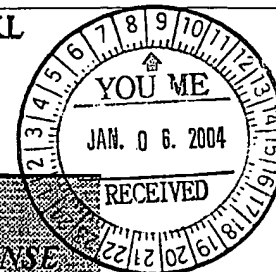
Our File No.: 60612-CKL

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DEADLINE FOR  
SUBMITTING RESPONSE  
13 February 2004



From: Lawrence Lou (Coordinator)/C. V. Chen

Re: Samsung Electronics Co., Ltd.  
ROC (Taiwan) Pat. Appl. No. 088116952  
Your Ref.: OPP 980325 TW  
Our File No.: 60612-CKL

Dear Sirs:

**I. Office Action & Deadline**

With reference to the subject patent application under re-examination, we received another preliminary notice of final rejection from the Intellectual Property Office (IPO). We enclose an English translation of the notice and will send you a copy of the notice with the original of this fax.

The deadline for submitting a response to the notice is 13 February 2004. Please ensure that your instructions reach us ten days before the deadline, so that we can have sufficient time to prepare the response. In the absence of your instructions before the deadline, we will apply for an extension to 9 April 2004 to submit the response at the cost of NT\$2,500.

**II. Our Comments****(1) Basis for Tentative Rejection**

Following is the quotation from Article 20 of the Patent Law which forms the basis for the rejection in this Office Action.

**Article 20**

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- 2 -

An invention which is industrially applicable and is free from any of the following conditions may obtain a patent therefor upon application in accordance with this Law:

1. (omitted in translation); or
2. (omitted in translation).

An invention not subject to either one of the conditions listed in the preceding Paragraph shall still not be granted an invention patent under this law if it utilizes conventional technology or knowledge known prior to applying for patent, and can be easily accomplished by persons skilled in the art. (emphasis added)

An applicant claiming the application of the proviso of Item 1 or Item 2, Paragraph One of this Article shall indicate the facts and the relevant dates in his application and submit evidential documents within the time limit specified by the Patent Authority.

(2) Examiner's Reasons for Rejection

The Examiner intends to reject the present application for lacking an inventive step primarily on the ground that the present invention can be accomplished easily by persons skilled in the art in view of page 219 to 220 of a book, entitled "FLEXIBLE MANUFACTURING SYSTEM DESIGN AND PRACTICE" and published by Chuan-Hua Book Store on September 1988 (the Citation).

For your ready reference, we translate the paragraphs marked by the examiner. If you need an English translation the Citation in part or entirety, please let us know.

(3) Merits of the Present Invention

Currently, most TFT-LCD manufacturing processes are automated to enhance productivity. Therefore, when processing substrates in a specific process apparatus used for this purpose, a cassette that stores the substrates to be processed is transferred to the process apparatus by an automated guided vehicle (AGV) and is then loaded into the process apparatus. The substrates in the cassette undergo various processes in the process apparatus.

Although the above processes are automated, when a problem occurs in the process apparatus, an operator must be able to check the status of the process apparatus. In this case, the substrates are transferred to the

process apparatus in a cassette by a manually guided vehicle (MGV) that the operator manually operates.

Therefore, in the conventional substrate manufacturing process, the way of processing the substrates depends upon which transfer device (AGV or MGV) is used to transfer the cassette to the process apparatus. That is, when transferring the cassette to the process apparatus using the AGV (hereinafter referred to as an "AGV mode"), job processes on the substrates in each portion of the process apparatus including cassette loading are almost entirely performed automatically. On the other hand, when transferring the cassette to the product process apparatus using the MGV (hereinafter referred to as an "MGV mode"), job processes on the substrate in each process apparatus are manually or automatically performed according to the needs of the operator.

However, in the conventional substrate transfer systems, cassettes can be moved in and out of the process apparatus using only a transfer device that corresponds to the transfer mode set in the manufacturing process apparatus. Using a transfer device that does not correspond to the set transfer mode causes an error.

Therefore, in the conventional substrate transfer systems, the transfer mode set in the process apparatus is checked, and the cassette is then moved using the transfer device corresponding to this transfer mode. This is a cumbersome process which results in a decrease in overall productivity.

It is an objective of the present invention to provide an integrated repair system and its controlling method in which files, having information on defects and how to repair the defects, are merged as a batch at one time, and the merged files are referred to at a final manufacturing step after all inspections have been performed.

In one aspect of the present invention, a system for moving substrates in and out of a manufacturing process, the system comprising an automatic transfer device for automatically transferring a cassette which stores substrates, a manual transfer device for transferring the cassette according to the instructions of an operator, and a process apparatus for performing predetermined jobs on the substrate stored in the cassette, wherein the process apparatus comprises: a port on which the cassette is temporarily placed by the automatic transfer device or the manual transfer device; a loader which has a sensor to receive a communication start signal transferred from the automatic transfer device when the cassette is transferred by the automatic transfer device; and a job table on which actual jobs on the substrates, stored in the cassette, are performed, and wherein



- 4 -

when the cassette is placed on the port, the process apparatus checks whether the communication start signal is received by the sensor, and when the signal is received, it is determined that the cassette has been transferred by the automatic transfer device, such that the process apparatus is set in an automatic transfer mode, and when the signal is not received, it is determined that the cassette has been transferred by the manual transfer device, and therefore, the process apparatus is set in a manual transfer mode.

**(4) Distinctions Between the Present Invention and the Citation**

The examiner considers that according to pages 219 to 220 of the Citation, in an automatic factory, the technical features of setting a transfer mode automatically and using its sensor to receive a signal from an automatic transfer apparatus of the present invention belong to conventional techniques utilized in automatic factories. However, the Citation fails to mention anything about the technical feature "when the cassette is placed on the port, the process apparatus checks whether the communication start signal is received by the sensor, and when the signal is received, it is determined that the cassette has been transferred by the automatic transfer device, such that the process apparatus is set in an automatic transfer mode, and when the signal is not received, it is determined that the cassette has been transferred by the manual transfer device, and therefore, the process apparatus is set in a manual transfer mode" of the present invention. Thus, the present invention does have an inventive step over the Citation. We welcome your comments.

To contest the matter, in addition to our above observations, please let us have your technical arguments elaborating on why the claimed invention is not suggested, taught or inferred by the Citation. We will incorporate the same in the re-examination brief to traverse the rejection.

Best regards,

... end of message ...

CVC/ck/llj

Encl. (3 pages)



**PRELIMINARY NOTICE OF REJECTION OF THE IPO**  
**(TRANSLATION)**

Issuance Date: 17 December 2003

1. Application No.: 088116952
2. Attorney: C. V. Chen

Address: 7th Floor, No. 201, Tun Hua North Road, Taipei

**SUBJECT:**

- (1) If any amendment is effected, it should be effected according to the provisions of the Patent Law, Articles 44, 44-1 and 102-1, the Enforcement Rules of the Patent Law, Article 28, and the Announcement Jyh-Fa No. 0918600118-0 issued on 8 November 2002 by this Office, and a government fee of NT\$1,000 for amendment should be paid. (If the applicant makes supplements or amendments to the specification or drawings, a written application for such supplements or amendments in duplicate, a marked-up version of the amended specification or drawing pages in duplicate, and a replacement, non-marked-up version of the amended specification or drawing pages in triplicate shall be submitted. If the supplements or amendments render the page numbers of the original specification out of succession, the whole specification with the supplements or amendments in triplicate shall be submitted.)
- (2) If the applicant wishes to appear before the IPO for a face-to-face demonstration or explanation, please explicitly indicate "Interview Requested" in the response. The place and time for conducting an interview will be arranged if the IPO considers it necessary and a government fee of NT\$2,000 should be paid.
- (3) After re-examination, the examiner has the following comment:

The applicant submitted arguments on 12 September 2003. The following points are pointed out in the arguments: "In comparison with a transfer mode automatically set by the present invention and its sensor used to receive a signal from an automatic transfer apparatus, the sensor disclosed by the Citation (i.e., ROC Patent No. 348158) is not used to ensure which transfer component used to transfer said cassette, instead it senses whether said cassette is put in the inlet/outlet or not. Thus, the Citation fails to disclose the means of the present invention which receives a signal from the automatic transfer system and set the transfer mode to an automatic transfer mode or a manual transfer mode according to said signal." However, according to pages 219 to 220 of a book, entitled "FLEXIBLE MANUFACTURING SYSTEM DESIGN AND PRACTICE" and published by Chuan-Hua Book Store on September 1988, in an automatic factory,



- 2 -

the technical features of setting a transfer mode automatically and using its sensor to receive a signal from an automatic transfer apparatus of the present invention belong to conventional techniques utilized in automatic factories. Thus, the design of the present invention belongs to conventional techniques and knowledge prior to applying for the subject patent, can be accomplished easily by persons skilled in the art, lacks an inventive step and does not conform to the provisions of Paragraph 2 of Article 20 of the Patent Law.



Partial Translation of the Citation

The wireless control can communicate with the computer in work and the remote computer, no matter whether the vehicle is moving. In order to send instructions to the vehicle, messages are sent out from the computer through message sending apparatus to find out the location of the vehicle. Thus, the transferred signal is received by the corresponding vehicle only.

The vehicle also sends messages to the remote controller to report the vehicle status, vehicle breakdown and battery status.





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☒ 886-2-2718-8497

☐ 886-2-2718-7099

☐ 886-2-2719-3659

☐ 886-2-2514-9841

### FAX TRANSMISSION SHEET

5 January 2004

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